

At the outset, Applicants address the rejection of Claims 1-9 under 35 U.S.C. § 112, ¶2. The Patent Office asserts that Claims 1, 4, 5 and 6 are indefinite. The Patent Office asserts in Claim 1 the term "100/ $\mu$ m" and the like is unclear as it appears that the division sign is necessary; in Claims 1 and 6 the terms "condition of scraping" is unclear; in Claim 4 the addition of boron is unclear; in Claim 4 the terms "for graphization" is unclear; in Claim 5 the two heating steps appear redundant or contradictory; in Claim 6 the term "oxidating" and the term "the heat treatment" is unclear; and in Claim 4 the term "elevated speed" is subjective and unclear.

As previously discussed, Claims 1, 4, 5 and 6 have been amended. Applicants note for the record that the amendments to these claims were made for clarification purposes and therefore do not have a narrowing effect on the scope of the claimed invention.

With respect to Claim 1, the division sign has been added as suggested by the Patent Office. This is supported by the Specification on page 26. With respect to the claim term "condition of scraping", Claims 1 and 6 now require "a condition of scraping off". This is clearly supported in the Specification on pages 34 and 35.

With respect to Claim 4, Applicants submit that the addition of the boron feature is more clearly defined as now amended. However, Applicants submit that the terms "for graphization" and "elevated speed" are sufficiently clear as supported in the Specification. For example, the powdered carbon material, obtained on pulverization and carbonization, is heated for graphization. The heat treatment for graphization can exceed 1500°C. See, Specification, pages 32-33.

Further, the term "elevated speed" is sufficiently clear. Of course, the claim must only "reasonably apprise those skilled in the art" as to their scope to satisfy the definiteness requirement. *Hybridtech v. Monoclonal Antibodies, Inc.*, 231 U.S.P.Q. 81, 94 (Fed. Cir. 1986). In this regard,

one skilled in the art could reasonably ascertain the meaning of this term as clearly supported in the Specification, for example, on page 30.

With respect to the rejection of Claims 5 and 6 as being indefinite, Applicants submit that amended Claims 5 and 6 are sufficiently clear. Therefore, Applicants submit that Claims 1-9 fully comply with 35 U.S.C. § 112.

Accordingly, Applicants respectfully request that the rejection of Claims 1-9 under 35 U.S.C. § 112 be withdrawn.

In the Office Action, Claims 1-9 are rejected under 35 U.S.C. § 102(b) as being anticipated by, or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over *Tamaki*. The Patent Office essentially asserts that *Tamaki* teaches or suggests each and every feature of the claimed invention. Applicants submit that this rejection is improper. Claims 1-9 are pending. Of these, Claim 1 is the only independent Claim. Independent Claim 1 requires, in part, a graphite powder that contains boron and has a looped closure structure at an end of a graphite c-planar layer on the surface of a powder wherein the density of the interstitial planar sections between neighboring closure structures is not less than 100/ $\mu\text{m}$  and not more than 1500/ $\mu\text{m}$ .

Applicants have uniquely discovered that the graphite powders of the present invention exhibit high crystallinity and high density of the interstitial planar section of the looped closed structures without having to utilize special, expensive materials to manufacture same. Further, Applicants have shown that by employing the graphite powders of the present invention as a negative electrode material of a lithium ion secondary battery, it is possible to realize a high discharging capacity that can exceed 350 mAh/g. See, Specification, page 17. This is clearly supported by the experimental tests and results thereof conducted by Applicants beginning on page 43 of the Specification and summarized, for example, in Table 1, on page 48.

In contrast, *Tamaki* fails to teach the surface area and between-closure structure features of the claimed invention as even admitted by the Patent Office. This clearly suggests that *Tamaki* fails to teach or suggest the density feature of the graphite powder of the claimed invention.

In this regard, the Patent Office's reliance on the d spacing teaching of *Tamaki* as suggesting the structural characteristics of the graphite powders of the claimed invention is misplaced. Even if the d spacing is the same as between *Tamaki* and the claimed invention, the Patent Office cannot make the assumption that the other structural features would necessarily be the same as well. Indeed, Table 1 of the Specification illustrates that the c-access (002) planar lattice distance (d002) can remain relatively constant at increasing densities.

Further, the Patent Office admits that *Tamaki* teaches a process in which mesophase pitch is carbonized, milled, contacted with a boron source and heated to graphitization temperatures. This teaching, on its own, clearly fails to teach or suggest the subsequent heat treatment features as further required by Claims 5 and 6.

Indeed, Claim 5 requires that the carbon material is heated to scrape off the surface subsequent to graphitization, and then heated again in an inert environment. Claim 6 depends from Claim 5 and further limits the heating to scrape off the surface to include oxidizing heat. Indeed, Applicants have demonstrated that heat treatments subsequent to graphitization can result in increased densities and therefore increase discharging capacities as illustrated in Table 1 on page 48 of the Specification.

Based on the fact that *Tamaki* fails to teach or suggest each and every feature of the claimed invention, Applicants submit that *Tamaki* fails to anticipate and/or render obvious Claims 1-9. Accordingly, Applicants respectfully request that the prior art rejection of Claims 1-9 in view of *Tamaki* be withdrawn.

For the foregoing reasons, Applicants respectfully request that the above-identified patent application is now in a condition for allowance and earnestly solicit reconsideration of the same.

Respectfully submitted,



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